
NEAR COULOMB BARRIER HEAVY ION INDUCED FISSION REACTIONS

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Heavy Ion induced fission reactions at Coulomb barrier energies have provided a wealth of information regarding fission dynamics, role of entrance channel, nuclear structure of the interacting species and the compound nuclei. Systematic measurements of fission cross sections have been carried out for a range of projectiles from ^9Be to ^{19}F interacting with Th and U targets. The presence of pre - equilibrium fission (non - compound fission) in addition to compound nuclear fission has been established from these studies. The importance of nuclear shell effect in influencing the decay of the compound nuclei has also been brought out from these investigations. A review of the heavy ion fission studies performed by BARC group in the last 10 years covering the above aspects will be presented.